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TITLE:

APPARATUS FOR MONITORING COMMODITY REMAINING-

AMOUNT

PUBN-DATE:

August 17, 2001

INVENTOR-INFORMATION:

NAME

COUNTRY

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ABSTRACT:

PROBLEM TO BE SOLVED: To provide a vending-machine liquid-amount monitoring apparatus, with which liquid replenishment timing capable of preventing the liquid as the commodity of a vending machine from becoming out of stock can be controlled, on the basis of the remote monitoring operation of the liquid and in which a remaining-amount information acquisition means can be loaded and unloaded hygenically with reference to the liquid tank of the vending machine.

SOLUTION: A syrup remaining amount detecting apparatus 100 is constituted of a terminal machine. The terminal machine is provided with an <u>ultrasonic sensor</u> 101. The <u>ultrasonic sensor</u> 101 is provided with a vibrator 101a, which transmits <u>ultrasonic</u> waves toward the bottom wall of a syrup tank installed inside the <u>vending machine</u>. The <u>ultrasonic sensor</u> 101 is provided with a receiving part 101b, used to receive reflected waves which are transmitted to syrup inside the syrup tank from the bottom wall and which are reflected by the level of the syrup, so as to make it re-transmitted to the bottom wall. The terminal machine is provided with various circuits used to compute the reflected-wave detection time T, on the basis of an output signal from the <u>ultrasonic sensor</u> 101. The detecting apparatus 100 is constituted of a host computing device 119, which displays syrup-remaining amount on a display part 117. The detection apparatus 100 is constituted of a communication device 114, which realizes the communication of a signal between the terminal machine 111 and the host computing device 119 by a telephone line or by radio.

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